



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
SHENG-SHING LI ET AL
APPLICATION NO: 10/045,391
FILED: November 9, 2001
FOR: WETTABLE POLYOLEFIN FIBERS AND
FABRICS

Group Art Unit: 1771
Examiner: Peter Y. Choi
Confirmation No. 2361

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER RULE 132

Matthew Gande, the undersigned states:

That I received a Ph.D. in Chemistry from Cornell University, 1986;

That I have been employed by Ciba Specialty Chemicals Corporation and its predecessors since 1986;

That I have approximately 21 years of chemical research and development experience in the plastics additives area;

That from 1986 to date I have worked in the Research and Development laboratories of Ciba Specialties Chemical Corporation and its predecessors;

I consider myself to be an expert in this field;

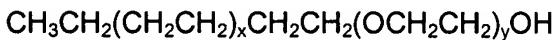
That the following experiments were performed by me or under my supervision.

UNITHOX ethoxylated alcohols are compounded into a high meltflow polypropylene, using a twin screw extruder, at 3% by weight. Non-woven fabrics of 40 grams per square meter are prepared from the blends using a research-scale meltblown extruder equipped with a 6" (121 hole) die.

Hydrophilicity is determined by observing the water absorption capacity of the fabrics: A 0.01m^2 disc is cut from the center of the fabric and weighed (w_i). After being submerged in distilled water at room temperature for one minute, the fabric sample is removed from the water bath and allowed to drain for 2 minutes. The sample is then reweighed (w_f). The liquid absorption capacity (LAC) is defined as: $\text{LAC} = 100\% \cdot (w_f - w_i) / w_i$. The reported values are an average of 3 experiments.

| <u>Ethoxylated Alcohol</u> | <u>LAC</u> |
|----------------------------|------------|
| Blank (none) | 29 |
| 3% UNITHOX 550 | 30 |
| 3% UNITHOX 420 | 74 |

The structure of the UNITHOX products are as follows:



| <u>Ethoxylated Alcohol</u> | <u>Average x/y</u> |
|----------------------------|--------------------|
| UNITHOX 420 | 13/2.5 |
| UNITHOX 550 | 18/12.5 |

UNITHOX 420 surprisingly performs much better than other ethoxylated alcohols towards providing wettability to polyolefin fibers. This result is surprising and could not have been predicted.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Matthew Gande

date